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Claim Amendments

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1. (Currently Amended) A valve operating system for an internal combustion engine, comprising:

a rocker arm;

a rocker actuation mechanism connected to the rocker arm;

a ball and socket joint having a wire-like retention device connected to a ball portion and a socket portion, wherein the socket portion has a foot extension, wherein the wire-like retention device is positioned in a[[n]] external groove formed by the socket portion, wherein the ball portion is connected to the rocker arm; and

a valve activation device connected to the socket portion.

2. (Currently Amended) The valve operating mechanism of Claim 1, where the socket portion has a foot extension, wherein the socket portion forms a cavity, wherein the valve activation device is connected to the socket portion continuously along an outer diameter of the foot extension, and wherein the socket portion forms the exterior groove between the foot extension and an entrance to the cavity.

3. (Currently Amended) The valve operating mechanism of Claim 1, wherein the ball portion has a flange between a pin extension and an interface surface.

4. (Currently Amended) The valve operating mechanism of Claim 1, wherein the ball portion has a pin extension inserted into a hole formed by the rocker arm.

5. (Currently Amended) The valve operating mechanism of Claim 1, wherein the ball portion has an interface surface, wherein the socket portion forms a cavity with an interior surface, and wherein the interface surface is positioned adjacent to the interior surface in the cavity.

6. (Currently Amended) A ball and socket joint for a valve operating system in an internal combustion engine, comprising:

a ball portion having a flange between a pin extension and an interface surface;

a socket portion having a foot extension, wherein the socket portion forms a cavity with an interior surface, where the socket portion forms a[[n]] exterior groove between the foot extension and an entrance to the cavity; and

a wire-like retention device having a pin segment connected to a foot segment, wherein the pin segment forms a pin loop, wherein the foot segment forms a foot loop;

wherein the interface surface is positioned adjacent to the interior surface in the cavity, wherein the pin extension is disposed in the pin loop, wherein the pin segment is adjacent to the flange, wherein the socket portion is disposed in the foot loop, and wherein the foot segment is positioned in the external groove.

7. (Currently Amended) The ball and socket joint of Claim 6, wherein the interface surface has a smaller cross-section than the flange.

8. (Currently Amended) The ball and socket joint of Claim 6, wherein the pin extension has a smaller cross-section than the flange.

9. (Currently Amended) The ball and socket joint of Claim 6, wherein the pin loop has a smaller cross-section than the flange.

10. (Currently Amended) The ball and socket joint of Claim 6, wherein the socket portion has a smaller cross-section at the exterior groove than at the foot extension.

11. (Currently Amended) The ball and socket joint of Claim 6, wherein the socket portion has a smaller cross-section at the exterior groove than at the entrance to the cavity.
12. (Currently Amended) The ball and socket joint of Claim 11, wherein the socket portion has a smaller cross-section at the exterior groove than at foot extension.
13. (Currently Amended) The ball and socket joint of Claim 6, wherein the foot segment extends partially along a circumference of the exterior groove.
14. (Currently Amended) The ball and socket joint of Claim 6, wherein the pin segment extends partially along a circumference of the pin extension.
15. (Currently Amended) The ball and socket joint of Claim 6, wherein the pin segment forms a plurality of windings around the pin extension.

16. (Currently Amended) An internal combustion engine with a valve operating system, comprising:

a cylinder head mounted on a crankcase, wherein the cylinder head and crankcase form a cylinder, wherein the cylinder head forms a valve path connected to the cylinder;

a valve disposed within the valve path;

a rocker arm mounted on the cylinder head;

a rocker actuation mechanism connected to the rocker arm;

a ball and socket joint having a wire-like retention device connected to a ball portion and a socket portion, wherein the socket portion has a foot extension, wherein the wire-like retention device is positioned in a[[n]] external groove formed by the socket portion, wherein the ball portion is connected to the rocker arm; and

a valve activation device connected to the socket portion, wherein the valve activation device is connected to the valve.

17. (Currently Amended) The internal combustion engine of Claim 16, where the socket portion has a foot extension, wherein the valve activation device is connected to the socket portion continuously along an outer diameter of the foot extension, wherein the socket portion forms a cavity, and wherein the socket portion forms the exterior groove between the foot extension and an entrance to the cavity.

18. (Currently Amended) The internal combustion engine of Claim 16, wherein the ball portion has a flange between a pin extension and an interface surface, wherein the socket portion forms a cavity with an interior surface, and wherein the interface surface is positioned adjacent to the interior surface in the cavity.
19. (Currently Amended) The internal combustion engine of Claim 18, wherein the pin extension is inserted into a hole formed by the rocker arm.
20. (Currently Amended) The internal combustion engine of Claim 16, wherein the valve is one of an inlet valve and an exhaust valve.